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Subj: LOADING PROCEDURE FOR DIVISION 1.1, 1.2, AND 1.3 EXPLOSIVE MATERIAL IN THE CAPTAIN OF THE PORT HOUSTON-GALVESTON AREA OF RESPONSIBILITY

Ref: (a) Title 49 Code of Federal Regulations (CFR) Parts 100-177
(b) Title 33 Code of Federal Regulations (CFR) Parts 125-199
(c) Title 29 Code of Federal Regulations (CFR) Parts 1900-1910.999, 1917, 1918 and 1919

1. Purpose and Discussion: The purpose of this policy letter is to outline the procedures for the loading of division 1.1, 1.2, and 1.3 (Class A) explosives at designated waterfront facilities in the Captain of the Port Houston-Galveston zone. All sites listed in this policy letter are paraphrased, for complete regulations consult the appropriate CFR for further guidance. Representatives of Coast Guard Marine Safety Office (MSU) Galveston, Marine Safety Office (MSO) Houston-Galveston and local Fire Marshals are requested to review this policy letter annually.

2. Action: Explosive loading operations in the Port of Galveston are coordinated by the U.S. Coast Guard, the Galveston City Fire Department and the Port of Galveston. Depending on the quantity of explosives, Dock 37 may be the only dock acceptable to all three agencies for loading explosives. Limited availability of the use of Dock 37 during weekdays and/or other operations in the port can impact the scheduling of an explosive load. To prevent scheduling problems, a minimum of three days notice prior to any desired loadout is required. Within the three days and at least 24 hours prior to the explosive loadout the vessel's agent must set up a meeting with MSU Galveston, Galveston Fire Department, Port of Galveston and a representative of the stevedore company. If the explosive loadout is to take place in the MSO Houston-Galveston AOR, then the vessel agent must set up a meeting with MSO Houston-Galveston, the local fire marshall and the Port of Houston Authority. This meeting will be held to establish the official loading schedule and provide all necessary documentation for the Fire Department and Coast Guard Permits. If requested, MSU Galveston will provide a conference room for the meeting.

a. Shippers desiring to load division 1.1, 1.2 or 1.3 (Class A) explosives shall submit to MSU Galveston or MSO Houston-Galveston the following items not less than three (03) working days prior to the anticipated load:

i. A cover letter stating that the shipper or shipper's agent has notified the local Fire Marshal of the proposed explosive shipment and that the facility is able to

*Note: For division 1.4 (Class B and C) explosives, a telephone notification of the anticipated shipment, two (2) working days in advance, is required. No other Coast Guard permits are required.

meet all requirements necessary to carry division 1.1, 1.2 or 1.3 (Class A) explosives. The load out point must also meet the requirements of the DOD Ammunition and Explosive Safety Standards (DOD 6055.9 STD) for "Inhabited Building and Public Traffic Route Distances." These distances are 1,250 ft from inhabited buildings and 750 ft from public traffic routes for Net Explosive Weights (N.E.W.) up to 30,000 lbs. The locations and distances will be reviewed individually for larger shipments.

ii. Coast Guard Form CG-4200 (Rev. 10-92), Application and Permit to Handle Hazardous Material.

iii. A copy of the shipping papers for the explosives to be loaded on the vessel and any other explosives already onboard.

iv. Stowage plan for all dangerous cargo onboard the vessel prepared in accordance with the segregation requirements in 49 CFR Subchapter D. If the explosives are transported by container, the storage plan shall include the contents of the containers surrounding the explosive container(s). If the explosives are shipped as break bulk cargo, include in the vessel stowage plan a description of the type of magazine (if required) to be used for the explosives.

v. If the vessel is a passenger-carrying vessel the distances of the explosives from the passenger area of the vessel and the number of passengers expected onboard the vessel.

b. Shippers desiring to load any division of explosives shall have readily available for examination by the Coast Guard:

i. Records of compliance showing current training for each "Hazmat Employee". Hazmat Employees will include all personnel who will be involved in the handling, stowage and transportation of the explosives.

ii. Owners of cargo gear must maintain documentation for inspection at or near the worksite for all initial and periodic tests as well as annual examinations as required in 29 CFR 1919.90(d).

iii. 46 CFR 91.17-1 Cargo Gear Inspection Intervals for U.S. Inspected Vessels as required by the USCG. A thorough examination of assembled gear shall be made at least once a year. Documentation of proof load tests, followed by dismantling or disassembling of gear and thorough examination shall be made at least every 5 years.

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iv. 29 CFR 1919.13 Subpart D and 29CFR 1919.70 Subpart H Testing and Examinations of Cranes, Derricks and other Hoisting Machines as required by OSHA. Cranes, Derricks and other Hoisting Machines must be tested and thoroughly examined every 4 years. A visual examination is required every year. Documentation of these exams must be readily available.

v. 29 CFR 1919.16 Chains, Rings, Hooks, Shackles and Swivels Made of Wrought Iron Shall Be Annealed as required by OSHA. Chains, Rings, Hooks, Shackles and Swivels made of wrought iron shall be annealed according to their size and use as required in 29 CFR 1919.36(b)

vi. 29 CFR 1910.184 Alloy Steel Chain Test Records. Documentation of the month in which each alloy steel chain sling was thoroughly inspected and the Certificate of the Proof Test.

vii. The location of an area for the Fire Marshall and the Coast Guard to inspect the container(s) carrying the explosives prior to crossing the Galveston Causeway Bridge.

viii. A pre-identified holding area, off the waterfront facility, approved by the Fire Marshall in accordance with 29CFR 1910.109(d)(3)(iii)(b).

3. The container(s) to be used for the explosives will be inspected by a Coast Guard Explosive Load Supervisor prior to its use for shipment by water. The containers will be opened and inspected for proper marking, labeling, placarding and packaging prior to being allowed on the vessel. [If the shipment is international the container must have a valid CSC Safe Container Plate, see 3.d.]

a. 49 CFR 176.170(b) N.E.W. Containers exceeding 20 ft in length may not carry more than 11,023-lbs. N.E.W. of an explosive substance. Note that division 1.4 explosive substances are limited by the weight capacity of the container.

b. Containers loaded with division 1.1 (Class A) explosives will contain no other cargo. All applicable Federal Regulations concerning segregation of cargoes must be strictly followed.

c. The shipper must ensure that the container(s) of division 1.1 (Class A) explosives arrives at the designated inspection area in such a manner that it can, once inspected by the Coast Guard Explosive Load Supervisor, proceed directly to the facility, then to the vessel to be loaded without undue delay. The only exception to this is in the case of inclement weather, where the Coast Guard Explosive Load Supervisor will prohibit the

loading and direct the container(s) of explosives to be held in the pre-designated holding area. If there are any changes in the time the explosives arrive at the designated facility, or in the sailing time of the vessel, it is the shipper's responsibility to inform MSU Galveston as soon as those changes are known.

d. 49 CFR 176.172(a) Container Structural Serviceability. A freight container may not be offered for international carriage of Class 1 explosive materials unless the container is structurally serviceable as evidenced by a current CSC (International Convention for Safe Containers) approval plate and verified by a detailed visual examination. This examination will be completed by the United States Coast Guard Explosive Handling Supervisor.

e. 49 CFR 176.192 Maximum Container Gross Weight. The gross weight of a freight container containing Class 1 explosive materials may not exceed the safe working load of the cargo handling equipment by which it is handled.

4. Before the explosive load is permitted on the Facility of Particular Hazard, the Coast Guard Explosive Load Supervisor will inspect the loading area for the following items in accordance with 33 CFR 126.15 and 33CFR 126.16.

a. 126.15(a) Guards. Ensure guards are provided by the owner/operator of the facility to assure adequate surveillance, prevent unauthorized entrance, detect fire hazards, and check the readiness of fire protection equipment.

b. 126.15(b) Smoking. Smoking on the waterfront facility is prohibited; except in such portions that the owner/operator may designate. These areas shall be in accordance with all local ordinances, and the areas will be conspicuously marked as such. All other areas shall be "NO SMOKING" areas, and signs will be conspicuously posted to that effect.

c. 126.15(c) Welding or Hotwork. Ensure welding or hotwork or the operation of such equipment on the waterfront facility or on vessels moored there to during the handling, stowing, storing, loading, or discharging of explosives is prohibited without the specific approval of the Captain of the Port.

d. 126.15(d) Trucks and other motor vehicles. Ensure trucks and other motor vehicles are not permitted to remain or park upon the waterfront facility except when being used to load or unload cargo, when the vehicle is handled as cargo, or when in a designated parking area.

e. 126.15(e) Pier automotive equipment. Ensure all pier automotive equipment driven by internal combustion engines are in such a condition and construction as not to present a

fire hazard, that each unit has a fire extinguisher approved by the Captain of the Port, that vehicles are stored in proper storage areas, and that refueling of said vehicles is prohibited on any wharf or pier of the facility.

f. 126.15(f) Rubbish or waste materials. Verify that the facility is free of all rubbish or debris. Burning of rubbish on a waterfront facility is prohibited.

g. 126.15(g) Maintenance stores and supplies. Supplies classified as dangerous by 49 CFR 170-179, except those preceded by an "A" in the Hazardous Materials Table (49 CFR 172.101), which are to be used to maintain or in the operation of a facility, are not to be stored on any wharf or pier, or in any amount more than needed for routine operations. The storage areas are to be kept clean, easily accessible, and provide safe stowage of the materials.

h. 126.15(h) Electrical wiring. Ensure existing wiring is maintained in a safe condition, free of defects or modifications, which may cause fire or personal injury. Defective wiring must be permanently disconnected from any power source. New wiring must be in compliance with the latest accepted safe practices.

i. 126.15(i) Heating equipment and open fires. Ensure heating equipment is safely installed and in good working condition, with adequate clearance to prevent any undue heating of any nearby combustible materials. Open fires of any type are prohibited.

j. 126.15(j) and (k) Fire extinguishing equipment and marking of equipment locations. Ensure fire-extinguishing equipment is made available in adequate quantities, types, and locations, and the locations are readily accessible and conspicuously marked. Two fire hoses shall be laid out, connected to shore hydrants, and charged on pier side fore and aft of loading area.

k. 126.15(l) Lighting. When nighttime loading is permitted, the waterfront facility must be adequately illuminated. No kerosene or gasoline lanterns may be used.

l. 126.15(m) Arrangement of cargo, freight, merchandise or material. All cargo and freight on the facility is arranged to permit complete access for the purpose of fire extinguishment.

m. 126.16(b) Warning alarms. If the siren type is used, it must be able to be heard one mile away. If a rotating light is used, it must be visible one mile away.

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n. 49 CFR 172.704 Training requirements. Prior to loading, the Coast Guard Explosive Load Supervisor will review for compliance the record of the current training for each "Hazmat Employee" which will be involved in the loading from the facility.

5. After the inspection of the facility, the Coast Guard Explosive Load Supervisor will inspect the ship to insure the following:

a. 49 CFR 176.54, 49 CFR 164(c) Hotwork. No burning, welding, cutting or riveting of any type is permitted onboard the vessel immediately before the load, during the load, or after the load is onboard the vessel.

b. 49 CFR 176.58(a), 49 CFR 176.116(b)(2) Vessel Cleanliness. Each hole or compartment of the vessel which is to be used for the explosives, under all decks, gangways and hatches through which hazardous materials must pass through are to be clean of all debris, and bilges are to be clean of any residues.

c. 49 CFR 176.60, 49 CFR 176.182(f) "No Smoking" signs. It is the responsibility of the master and the carrier to ensure that "No Smoking" signs are conspicuously located.

d. 49 CFR 176.148, 49 CFR 176.182(c) Lights, tools and equipment. No artificial light except electric lights or lamps or floodlights may be used. The carrier will provide non-sparking flashlights for those requiring their use.

e. 49 CFR 176.182(e) Liquor or drugs. No person under the influence of liquor or drugs may participate in any operation involving the handling of Class 1 materials.

f. 49 CFR 176.176 Warning Signals. Ensure that during the loading operation a Bravo flag is displayed during the day and all around fixed red light at night.

g. 49 CFR 176.164(b) Vessel Fire Hoses. A fire hose of sufficient length to cover the area of the loading operation and connected with an adequate water supply shall be laid out on deck and ready to use.

h. 49 CFR 176.164(a) Ignition Sources Prohibited. Matches, lighters, fire, and other ignition sources are prohibited on or near any vessels on which Class 1 materials are being loaded, unloaded, or handled except in places designated by the master or Captain of the Port.

i. 49 CFR 176.104(e) Lifting Hooks. Only a safety hook or a hook that has been closed by wire may be used in handling Class 1 materials.

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j. 49 CFR 176.104(f) Wire Rope Assemblies. Wire rope and wire rope assemblies must be unpainted for inspection.

k. 49 CFR 176.108(c) Responsible Person. During the loading operation the responsible person must be in attendance of the vessel at all times and in constant communication with the vessel's master. The responsible person must inspect all cargo handling equipment to determine that it is in safe operating condition before it is used to handle division 1.1 (Class A) explosives.

l. 49 CFR 176.58(c) Fire Hazards. Weather decks must be free of fire hazards.

m. 49 CFR 176.178 Mooring Lines and Towing Wires. All mooring lines must be sufficient in number and strength for the size of vessel and local conditions. When docked at the pier, the vessel's towing wires must be secured to mooring bits at the bow and stern, ready for immediate use with towing eyes outboard near the water level.

n. 49 CFR 176.30 Dangerous Cargo Manifest. The Dangerous Cargo Manifest shall be on or near the vessel's bridge.

o. 49 CFR 176.154 Bunkering Operations. No bunkering shall take place just prior to, during, or after the loading of explosives.

p. 49 CFR 176.13 Hazmat Employees. The record of training required by 49 CFR 172.704(d) for a crewmember who is a "Hazmat Employee" shall be reviewed for compliance.

q. 49 CFR 176.57 Supervision of Loading Operation. The loading shall be done under the direct supervision of the Master, or other ship's officer designated by the Master. The responsible officer shall be aware that in the event of fire or casualty aboard the vessel, fire fighting will be carried out in accordance with the vessel's fire plan.

r. 49 CFR 176.78(a) Vehicles onboard vessel. Power operated vehicles may not be used on board a vessel in a space containing a hazardous material unless the vehicle is in compliance with 49 CFR 176.78.

s. 49 CFR 176.116(a) Heat Sources. Class 1 explosive materials must be kept as cool as practical while on board. Stowage must be away from all sources of heat including steam pipes, heating coils, sparks and flames.

t. 49 CFR 176.116(b) Stowage Dryness. Spaces where Class 1 explosive materials are stowed below deck must be dry.

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u. 49 CFR 176.116(c) Secured Stowage. All compartments, magazines and transport units containing Class 1 explosives must be locked or suitably secured to prevent unauthorized access.

v. 49 CFR 176.116(d) Prevention of cargo shifting in transit. All Class 1 materials must be securely stowed to prevent movement in transit.

w. 49 CFR 176.116(e) Segregation from Machinery Spaces. Class 1 materials must be stowed as far away as possible from any accommodation or machinery spaces.

x. 49 CFR 176.118 Electrical System Isolation. All electrical equipment in compartments in which Class 1 articles are stowed which need not be energized during transit shall be electrically isolated by circuit breakers or the removing of fuses. If a space will be energized during transit ensure compliance with 49 CFR 118 (b),(c),(d) and (e).

y. 49 CFR 176.120 Electrical Bonding. Effective electrical bonding against lightening strikes must be provided between the mast or structure and the sea. Most steel masts in ships of all welded construction comply with this requirement.

z. 49 CFR 176.162 Security of Hatches and Compartments. A responsible person must be present at all times when the hatches of spaces containing Class 1 explosive materials are open. No unauthorized person may be permitted to enter explosive material stowage spaces. Magazines must be secured when loading is completed or when loading is stopped. Packages containing explosive material may not be opened on board ship.

aa. 49 CFR 176.164(d) Fixed Fire Extinguishing Systems. Each compartment which contains Class 1 explosive materials must be protected with a fixed fire extinguishing system. Each adjacent cargo compartment either must be protected by a fixed fire extinguishing installation or must be accessible for firefighting operations.

bb. 49 CFR 176.164(e) Breathing Apparatus and Fire Pump. A vessel must have two sets of breathing apparatus and a power-operated fire pump, which together with its source of power and sea connections must be located outside the machinery space.

cc. 49 CFR 176.180 Firefighting Watch. Whenever Class 1 explosive materials are on board a vessel in port there must be sufficient crew onboard to maintain a proper watch and to operate the propulsion and firefighting equipment in case of an emergency.

dd. 49 CFR 176.182(a) Weather. Class 1 explosive materials may not be handled in weather conditions which may seriously increase the hazards presented by the material.

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ee. 49 CFR 176.182(b) Darkness. Class 1 explosive materials may not be handled on board a vessel during the hours of darkness unless prior consent has been obtained from the COTP.

ff. 49 CFR 176.182(d) Personnel Protection. A sufficient quantity of appropriate protection equipment must be provided for personnel involved in handling Class 1 materials.

6. 49 CFR 176.150 Radios and Radar. All vessels loading Class 1 explosives, except division 1.4 shall deenergize the vessel's radar and radios by opening the main switches controlling the sources and tagging them to warn the crew not to reenergize them until the explosive loading is complete. Any radio over 25 watts may not be used within 164 feet of any explosive articles during the loading operation. Explosive articles that are sensitive to electromagnetic radiation from external sources must be stowed at a safe distance from the radio and antenna sources.

7. Other vessels moored at the facility shall be allowed to continue normal operations while explosives are on the facility. However, they should be prepared to get immediately underway if directed by the Coast Guard.

8. It is the responsibility of the shipper or the shipper's agent to inform the other vessels moored at the facility that explosives are being loaded. These vessels shall be made aware of the stipulations set forth in paragraphs 6 and 7 above, and MSU Galveston or MSO Houston-Galveston shall be notified of the fact that the vessels have been so informed.

9. No leaking, broken or otherwise defective packages containing Class 1 explosive articles may be accepted for shipment on board a vessel. No Class 1 explosive articles which for any reason have deteriorated or undergone a change of condition that increases the hazard attendant upon its conveyance or handling may be moved in the port area, except as directed by the COTP.

10. When the container(s) are loaded, the Coast Guard Explosive Load Supervisor will observe the proper securing of the load, have the vessel's Master accept the load by signing the explosives permit, and watch the vessel depart. The vessel must depart from the port area as soon as is reasonably practical. The vessel is responsible for ensuring that the pilots are readily available for departure immediately after the explosives have been secured.